

Assessing climate change impacts for the city of Aachen related to demographic change and health progress report

Author(s): Schneider C, Balzer C, Buttstädt M, Eßer K, Ginski S, Hahmann J, Ketzler G,

Klemme M, Kröpelin A, Merbitz H

Year: 2011

Journal: Advances in Science and Research. 6: 261-270

Abstract:

The research initiative CITY 2020+ assesses the risks and opportunities for residents in urban built environments under projected demographic and climate change for the year 2020 and beyond, using the city of Aachen as a case study. CITY 2020+ develops strategies, options and tools for planning and developing sustainable future city structures. The investigation focuses on how urban environment, political structure and residential behaviour can best be adapted, with attention to the interactions among structural, political, and sociological configurations and their impacts on human health. The interdisciplinary research is organized in three clusters. Within the first cluster, strategies of older people exposed to heat stress, and their networks as well as environmental health risks according to atmospheric conditions are examined. The second cluster addresses governance questions, urban planning and building technologies as well as spatial patterns of the urban heat island. The third cluster includes studies on air quality related to particulate matter and a historical perspective of city development concerning environmental issues and climate variability. However, it turns out that research topics that require an interdisciplinary approach are best addressed not by pre-structuring the work into related sub-projects but through combining them according to shared methodological approaches. Examples illustrating this rather practical approach within ongoing research are presented in this paper.

Source: http://dx.doi.org/10.5194/asr-6-261-2011

Resource Description

Early Warning System: M

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure: M

weather or climate related pathway by which climate change affects health

Air Pollution, Temperature, Unspecified Exposure

Air Pollution: Interaction with Temperature, Particulate Matter

Temperature: Extreme Heat, Fluctuations

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Geographic Feature: **☑**

resource focuses on specific type of geography

Urban

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country: Germany

Health Co-Benefit/Co-Harm (Adaption/Mitigation):

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specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact: M

specification of health effect or disease related to climate change exposure

Injury, Other Health Impact

Other Health Impact: heat stress

Medical Community Engagement:

resource focus on how the medical community discusses or acts to address health impacts of climate change

A focus of content

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: M

populations at particular risk or vulnerability to climate change impacts

Children, Elderly

Resource Type: **№**

format or standard characteristic of resource

Research Article

Timescale: M

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time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: **☑**

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content